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CLAIMS:

What is claimed is:

1   1.   A process in a data processing system executing a routine having a plurality

2   of paths, wherein the routine has includes a plurality of first type instructions and

3   wherein the data processing system executes second type instructions, the process

4   comprising:

5   identifying a path within the routine that is being executed, wherein a plurality

6   of first type instructions are associated with the path; and

7   translating the first type instructions for the path being executed, wherein first

8   type instructions are translated into second type instructions for execution by the data

9   processing system, wherein first type instructions for unexecuted paths remain

10   untranslated.

1   2.   The process of claim 1 further comprising:

2   executing second type instructions for a path in response to a loop back

3   through the path during execution of the routine.

1   3.   The process of claim 1, wherein translated instructions for the path are

2   executed in an order and wherein the translated instructions are stored in execution

3   order.

1   4.   A process in a data processing system for executing a method having a

2   plurality of paths, wherein the data processing system executes native machine code,

3   the process comprising:

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4   identifying a path within the method that is being executed, ~~wherein a plurality~~

5   of bytecodes are associated with the ~~path; and~~

6   compiling bytecodes for the path being executed, wherein the bytecodes are

7   compiled into native machine code executed by the data processing system, wherein

8   bytecodes for unexecuted paths remain uncompiled.

1   5.   The process of claim 4 further comprising:

2   executing native machine code for a path in response to a loop back through

3   the path during execution of the method.

1   6.   The process of claim 4, wherein compiled instructions for the path are

2   executed in an order and wherein the compiled instructions are stored in execution

3   order.

1   7.   The process claim 4, wherein a JIT station is used in compiling the method.

1   8.   The process of claim 4, wherein a data structure is used during compiling

2   of the method to store information about a path as the path is compiled.

1   9.   The process of claim 8, wherein the data structure stores the native machine

2   code.

1   10.   The process of claim 9, wherein the data structure is a JIT station.

1   11.   A process in a data processing system for executing a method having a

2   plurality of paths in which each path with in the plurality of paths contains a

3   number of bytecodes, the method comprising:

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4   identifying the method that is to be executed; and

5   compiling the bytecodes into instructions for execution by the data

6 processing system for each path within the plurality of paths as each path is

7 executed.

1   12.   The process of claim 11, wherein unexecuted paths within the plurality of

2 paths remain in a bytecode form.

1   13.   The process of claim 11, wherein the instructions have an execution order

2 and further comprising:

3   storing the instructions in the execution order.

1   14.   The process of claim 11 further comprising:

2   executing the instructions for a path within the plurality of paths in

3 response to a loop back through the path during compilation of the method.

1   15.   The process of claim 11, wherein a data structure is used during compiling

2 of the method to store information about a path as the path is compiled.

1   16.   The process of claim 15, wherein the data structure stores the instructions.

1   17.   A data processing system for executing a method having a plurality of paths,

2 wherein the data processing system executes native machine code, the data processing

3 system comprising:

4   identification means for identifying a path within the method that is being

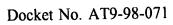5 executed, wherein a plurality of bytecodes are associated with the path; and

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6   compilation means for compiling bytecodes for the path being executed,

7   wherein the bytecodes are compiled into native machine code, wherein bytecodes for

8   unexecuted paths remain uncompiled.

1   18.   The data processing system of claim 17 further comprising:

2   execution means for executing native machine code for a path in response to

3   a loop back through the path during interpreting of the method.

1   19.   The data processing system of claim 17, wherein compiled instructions for the

2   path are executed in an order and wherein the compiled instructions are stored in the

3   execution order.

1   20.   The data processing system of claim 17, wherein a JIT station is used in

2   compiling the method.

1   21.   The data processing system of claim 17, wherein a data structure is used

2   during compiling of the method to store information about a path as the path is

3   compiled.

1   22.   The data processing system of claim 21, wherein the data structure stores

2   the native machine code.

1   23.   The data processing system of claim 22, wherein the data structure is a JIT

2   station.

1   24.   A data processing system comprising:

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2   a method having a plurality of paths in which each path within the plurality

3   of paths contains a number of bytecodes;

4   identification means for identifying that the method is to be executed; and

5   compilation means for compiling the bytecodes into instructions for

6   execution by the data processing system for each path within the plurality of paths

7   as each path is executed.

1   25.   The data processing system of claim 24, wherein unexecuted paths within

2   the plurality of paths remain in a bytecode form.

1   26.   The data processing system of claim 24, wherein the instructions have an

2   execution order and further comprising:

3   storing means for storing the instructions in the execution order.

1   27.   The data processing system of claim 24 further comprising:

2   execution means for executing the instructions for a path within the

3   plurality of paths in response to a loop back through the path during compilation

4   of the method.

1   28.   The data processing system of claim 24, wherein a data structure is used

2   during compiling of the method to store information about a path as the path is

3   compiled.

1   29.   The data processing system of claim 28, wherein the data structure stores

2   the instructions.

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1   30.   A computer program product for executing a method in a data processing

2   system, wherein the method has a plurality of paths in which each path with in the

3   plurality of paths contains a number of bytecodes, the computer program product

4   comprising:

5   first instructions for identifying that the method is to be executed; and

6   second instructions for compiling the bytecodes into compiled instructions

7   for execution by the data processing system for each path within the plurality of

8   paths as each path is executed.

1   31.   The computer program product of claim 30, wherein the compiled

2   instructions have an execution order and further comprising:

3   third instructions for storing the compiled instructions in the execution

4   order.

1   32.   The method of claim 30 further comprising:

2   third instructions for executing the compiled instructions for the path within

3   the plurality of paths in response to a loop back through the path during

4   compilation of the method.